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December 3, 2013

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Mr. Steve Faryan
On-Scene Coordinator
U.S. Environmental Protection Agency Region 5 (SC-5J)
77 W. Jackson Blvd.
Chicago, IL 60604

RE: Field Sampling Plan
Former Standard Oil Bulk Plant #5482
Wedron, LaSalle County, Illinois

Dear Mr. Faryan,

BP Products North America Inc. (BP) is submitting a Field Sampling Plan (FSP) for the Former Standard Oil Bulk Plant #5482 (Site). The FSP provides a summary of the recently completed geophysical survey, utility locations and historical document research, which was used to guide the proposed soil sampling locations. Soil sampling activities are intended to evaluate subsurface conditions resulting from historical operations conducted at the Site. The FSP has been prepared in support of an Administrative Order on Consent (AOC) as entered into voluntarily by the United States Environmental Protection Agency (EPA) and BP. The AOC provides for the preparation and performance of monitoring, testing, analysis and reporting on property formerly leased by BP's corporate predecessor at the Wedron Ground Water Contamination Site located in Wedron, LaSalle County, Illinois (the Wedron Site). Site background and investigation activities are summarized below.

Background

The Site is located on a railroad right-of-way on the east side of Wedron, Illinois along Route 11 (Figure 1). BP's corporate predecessor, Standard Oil Company (Indiana) leased the property from the railroad from approximately 1921 to December 1971. The property was used for petroleum bulk plant operations. Site plans attached to leases dating from 1926 to 1942, indicate the presence of a warehouse and two storage tanks. Additionally, Standard Oil leased a limited area between the property and railroad to accommodate above ground two inch diameter unloading pipes and an unloading rig. Historical correspondence indicates that by December 1971, the warehouse (garage), oil storage tanks, unloading pipes and storage barrels were removed from the property.

Previous investigations adjacent or near the subject property include the removal of a 560-gallon underground storage tank (UST) in July 2012 by Illinois Railway, LLC. The UST was uncovered on July 18, 2012 during construction of new siding track (near the eastern edge of the Site). During the removal of the UST, approximately 80 tons of impacted soils were removed and disposed of. A total of twelve soil samples were collected from the floor and sidewalls of the excavated areas. The samples were submitted for laboratory analysis of benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total lead analyses. During the UST removal, a representative of Illinois Railway contacted the Illinois Emergency Management Agency (IEMA) and incident number 20120767 was assigned to the release. A 45-Day Report/Corrective Action Completion Report which

provided a summary of the removal activities and data collection was submitted to the Illinois Environmental Protection Agency (IEPA) on August 7, 2012. The report requested a No Further Remediation (NFR) letter for the incident. The IEPA approved the request and granted a NFR for the release on August 20, 2012.

On August 23, 2012, six soil borings were advanced in the area of the former UST as part of a voluntary site assessment by Illinois Railway. Samples were collected and submitted for analysis of BTEX and total lead. No analyzed parameters were identified in exceedance of TACO Tier 1 industrial/commercial soil remediation objectives. The data was summarized in a report prepared on behalf of Illinois Railway, titled Voluntary Environmental Site Assessment, Illinois Railway Easements, dated October 2012.

On May 16, 2013, one groundwater monitoring well (WGW-MW5) was installed by the EPA near the former bulk plant as part of a larger investigation completed in association with the EPA's Wedron Groundwater Site investigation. One soil sample was collected during installation of the monitoring well and analyzed for volatile organic compounds (VOCs). Benzene was detected at concentrations greater than TACO standards for the soil component of the groundwater ingestion exposure route for Class I groundwater. Based on information obtained from the WGW-MW5 boring log, groundwater was not encountered above bedrock, as a result and a 15 foot well screen was set into the upper portion of the sandstone. Available data indicate no VOCs were present in groundwater at concentrations above method detection limits at the samples collected from WGW-MW5 on May 30, 2013.

In addition to site activities that are referenced above, Stantec has completed the following activities per the requirements of the AOC:

- Geophysical survey of accessible portions of the property,
- Property boundary survey
- Public utility location using the Illinois Joint Utility Locating Information for Excavators (JULIE) utility locating service
- Historical document research
- Health and Safety Plan
- Quality Assurance Project Plan

Geophysical Survey

A geophysical survey of the Site was completed by Ground Penetrating Radar Systems, Inc. (GPRS) on October 30, 2013. The geophysical survey was completed on the property and a portion of the adjacent right-of-way associated with former piping and unloading rig using ground penetrating radar (GPR) and electromagnetic interference (EMI) equipment. The geophysical survey was used to indicate the potential presence of a metallic objects such as piping, underground storage tanks, buried drums, or to identify potential unknown or abandoned buried utilities.

The Proposed Work Plan (BP, September 19, 2013) provided a description of the proposed geophysical survey locations; however, the steep slope conditions at the Site resulted in modifications to these locations that limited GPR to only flat portions of the Site and adjacent right-of-way. Figure 2 provides the approximate locations of the GPR survey; an EMI survey occurred over the entire surface of the Site and adjacent right-of-way.

The results of the geophysical survey were provided to EPA on November 15, 2013. GPR scanning of the flat portions of the Site and adjacent right-of-way did not reveal subsurface anomalies that were consistent with buried metallic objects such as underground storage tanks. The EMI scanning, which was conducted across the entire Site and adjacent right-of-way, including the steep slope, revealed anomalous readings directly adjacent to the railroad tracks where rail cars were located and at a location along the right shoulder of Route 11 believed to be a groundwater monitoring well (WGW-MW5). The EMI survey did not identify any subsurface

anomalies that were consistent with buried metallic objects such as underground storage tanks or piping.

Property Boundary Survey

The property boundaries of the land originally leased by the Standard Oil Company, as described on the survey drawing completed on October 2, 1935, were staked by Atwell on October 29, 2013. The original property boundary was based off of Mile Post #73 and the centerline of the main track. Atwell located the main track and objects in the area that had recorded mile post stationing data. Atwell also used the railroad Valuation Map for the area to locate existing physical objects in the area referenced on the Valuation Map to establish the mile post stationing, since Mile Post #73 was previously destroyed. Once Atwell had located the track centerline, established the railroad mile stationing, the limits of the described land were staked in the field. On October 30, 2013, GPRS used Global Positioning Systems (GPS) technology to provide GPS coordinates of the property corners.

Utility Locations

Public utilities were notified using the Illinois Joint Utility Locating Information for Excavators (JULIE) utility locating services and was completed on October 29, 2013. Additionally, utilities were surveyed during the geophysical survey. JULIE did not identify any subsurface utilities during locating activities. There was, however, one erroneous sewer line mark that originated at WGW-MW5, which is located along the east shoulder of Route 11. The geophysical survey did not identify subsurface anomalies that were indicative of utilities.

Historical Document Search

The following historical documents were used to identify Site features and historical bulk plant infrastructure: 1) Standard Oil Company leased land survey from 1935; 2) Sanborn Fire insurance maps from 1901-1951; 3) aerial photos from 1939 and 1951; and 4) correspondence between Standard Oil Company and Burlington Northern from October 1970 and January 1972. Bulk plant infrastructure believed to have been present prior to the closing of Site includes:

1. Garage/warehouse
2. Vertical above ground storage tanks (ASTs)
3. Product unloading rig
4. 2" galvanized pipes from unloading rig to ASTs

Internal Standard Oil Company correspondence and correspondence between Standard Oil Company and Burlington Northern, indicate that Standard Oil Bulk Plant #5482 permanently closed on October 16, 1970; product was removed from tanks on or before February 25, 1971; garage/warehouse and tanks were removed on or before August 9, 1971; and the unloading rig was removed on or before December 23, 1971. On January 28, 1972, Burlington Northern provided written notice to Standard Oil Company that Plant #5482 had been cleared, enabling termination of the lease agreement.

Based on the results of the geophysical surveys, utility locate, historical document search, and excavation activities during construction of new siding track at the eastern boundary of the Site, there does not appear to be any subsurface features that warrant further investigation via test pits or other intrusive or non-intrusive methods.

Soil sampling will proceed as was described in the Proposed Work Plan (BP September 19, 2013) with location modifications as a result of the inability to drill on the steep slope portion of the Site.

The soil sampling activities will be completed in accordance with all applicable subsections of IEPA, Title 35: Environmental Protection, Subtitle G: Waste Disposal and Chapter I: Pollution Control Board, Subchapter D: Underground Injection Control and Underground Storage Tank

Programs. Laboratory procedures and methods will meet the minimum specified detection limits in accordance with TACO: 35 IAC Part 742 and Part 734 of Subchapter D, Petroleum Underground Storage Tanks, specifically Section 734.415 regarding Data Quality.

Field Sampling Activities

Soil Boring Installation

Soil borings will be limited to the flat western (upper) Site boundary and eastern (lower) Site boundary where accessibility is not limited by steep terrain. Soil borings will be installed using direct push technology and will be advanced from ground surface to refusal/bedrock, or the groundwater table. Soil borings will be distributed at a higher density on the southern half of the Site where structures/tanks were historically located and at a lower density on the northern half of the Site. Five soil borings will be completed along the western Site boundary, consisting of three soil borings on the southern half and two soil borings on the northern half. Four soil borings are proposed along the eastern boundary of the Site. Due to potential scheduling delays associated with access limitation, potential railroad setback requirements and BP health and safety procedures, the soil borings installed along the eastern Site boundary may not be completed during the same Site mobilization as the western Site boundary soil borings. Proposed soil boring locations are included on Figure 2.

Based upon the findings from the soil investigation, installation of permanent monitoring well(s) is proposed if soil concentrations are above TACO Tier 1, Class I soil component of groundwater ingestion remediation objectives. The borings will be utilized to characterize the fill and subsurface materials and help delineate the presence or absence of gasoline-related constituents on the property.

A minimum of two soil samples from each soil boring location will be collected for analysis. The samples will be screened with a sensitive photoionization detector (PID), such as the UltraRae 3000 or equivalent. The samples will be collected based on PID readings and field observations with the goal of achieving vertical delineation of impacted soils above the water table. If there are no elevated PID readings, then one sample will be collected from 0-3 feet below ground surface (bgs) in undisturbed soil and the other from the bottom of the boring just above the water table or at the top of the bedrock. If there are elevated PID readings at only a single depth, then one sample will be collected at that depth and the other from the bottom of the boring just above the water table, or at the top of the bedrock. No soil samples will be collected below the water table.

Soil Sampling

Soil samples will be analyzed for VOCs via Method 8260B, semi-volatile organic compounds (SVOCs) via Method 8270C, total lead via Method 6010, and gasoline- and diesel-range organics (GRO/DRO) total petroleum hydrocarbons (TPH) via Methods 5031/8015 and 8015, respectively. The soil samples selected for analytical testing will be placed in the appropriate containers provided by the laboratory, logged, labeled, placed in iced coolers, and sent to Pace Analytical Services, Inc. (Pace), of Minneapolis, Minnesota for analytical testing using standard chain-of-custody procedures.

Quality control samples will be collected in the field, including field duplicates, trip blanks, and MS/MSDs. The soil samples selected for analytical testing will be placed in the appropriate containers provided by the laboratory, logged, labeled, placed in iced coolers, and sent to Pace, of Minneapolis, Minnesota for analytical testing using standard chain-of-custody procedures. Sample collection and sample analysis procedures will be in compliance with the approved Site Investigation Quality Assurance Project Plan (QAPP).

Groundwater Monitoring Well Installation

If soil results indicate the presence of impacted soils above TACO Tier 1, Class I soil component of groundwater ingestion remediation objectives, a minimum of three monitoring wells will be installed at the locations of the elevated concentrations. If several boring locations indicate soil concentrations above TACO Tier 1, Class I soil component of groundwater ingestion remediation objectives, the areas with more elevated concentrations will be targeted for monitoring well installation. Proposed locations for monitoring wells will be provided to the EPA beforehand to allow for review and approval.

The monitoring well(s) will be drilled with a truck-mounted drill rig or suitable alternative, capable of drilling into bedrock. The monitoring well(s) will be constructed with ten feet of two-inch diameter Polyvinyl Chloride (PVC) flush-threaded screen (0.010-inch slot) attached to solid PVC casing. The bottom of the screened interval will be capped with a threaded PVC bottom cap, and the top of the solid casing will be closed with a two-inch diameter lockable expansion plug-type cap. The monitoring well(s) will be constructed such that the screened interval will intersect the water table during seasonal groundwater fluctuations. A flush mounted well box with a bolt down cover will be installed into concrete to surround and protect the top of the well.

After well installation, the monitoring well(s) will be developed to allow free entry of water, to minimize turbidity of the sample, and to minimize clogging.

Monitoring wells will be surveyed to measure the top of casing and groundwater elevations. BP will work with the EPA to tie in site specific survey data to survey data collected in association with the Wedron Ground Water Contamination Site.

Groundwater Monitoring Well(s) Sampling and Water Level Measurements

Prior to collecting a groundwater sample, static water levels will be measured and recorded using an electronic oil/water interface probe capable of detecting the presence of water and any liquid-phase hydrocarbons (LPH). Groundwater samples will be collected from the monitoring well(s) using low-flow methodologies. The samples will be analyzed for VOCs via Method 8260B, SVOCs via Method 8270C, and GRO/DRO TPH via Methods 5031/8015 and 8015, respectively.

Quality control samples will be collected in the field, including field duplicates, trip blanks, and MS/MSDs. The groundwater samples selected for analytical testing will be placed in the appropriate containers provided by the laboratory, logged, labeled, placed in iced coolers, and sent to Pace, of Minneapolis, Minnesota for analytical testing using standard chain-of-custody procedures. Sample collection and sample analysis procedures will be in compliance with the approved Site Investigation QAPP.

Additional sampling of the monitoring wells will be based upon the sample results and direction from the EPA. The wells will remain in place until regulatory approval for abandonment is provided.

Decontamination and Investigation-Derived Waste

Tools and equipment will be steam cleaned between each boring to help prevent cross-contamination between the boreholes. Sampling tools will be cleaned between each sample collection event using a non-phosphate detergent wash and clean water rinse to help prevent cross-contamination between samples.

Soil cuttings and water will be placed into separate 55-gallon drums for temporary storage in a designated location. Upon completion of the waste profile requirements for disposal, the drums will be transported to a designated landfill or treatment facility.

Field Assumptions

- The proposed work will be conducted within the property limits based upon historical leases with the railroad. An access agreement with the Illinois Railway will be required.
- Field personnel and drilling subcontractors will be able to access all required portions of the site. All monitoring well locations will be accessible to a truck-mounted drill rig or suitable alternative.
- Field personnel will attempt to locate the proposed borings in readily accessible areas.
- Borings will be completed to refusal/bedrock (estimated to be approximately 23 to 25 ft bgs)
- Groundwater wells will be constructed such that the screened interval will intersect the water table (estimated to be approximately 23 to 25 feet bgs).
- Site access will be available at all times for field activities.
- EPA personnel will have access to groundwater wells installed as part of this FSP.

Schedule

Field activities will begin within 30 days of EPA approval of the FSP. Results of the soil sampling activities are expected approximately 15 days after completion. The results will be evaluated to assess if monitoring well installation and groundwater sampling are necessary as described in this FSP. If monitoring well installation and sampling are needed, BP will provide to EPA proposed monitoring well locations within 30 days after receipt of the results of the soil sampling activities. Monitoring well installation activities will begin with 30 days of EPA approval of the proposed monitoring well locations.

Sincerely,

Mary Wojciechowski
Operations Project Manager

Attachments:
Figure 1 - Site Location Map
Figure 2 - Proposed Soil Boring Location Map

Cc: Douglas Reinhart, BP Legal
Jacqueline Clark, EPA
Thomas Kenney, EPA
Stantec Consulting Services Inc.

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APPROXIMATE SCALE (FEET)

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SITE LOCATION MAP
BP SITE #5482
FORMER BULK PLANT
WEDRON, ILLINOIS

FIGURE: **1**

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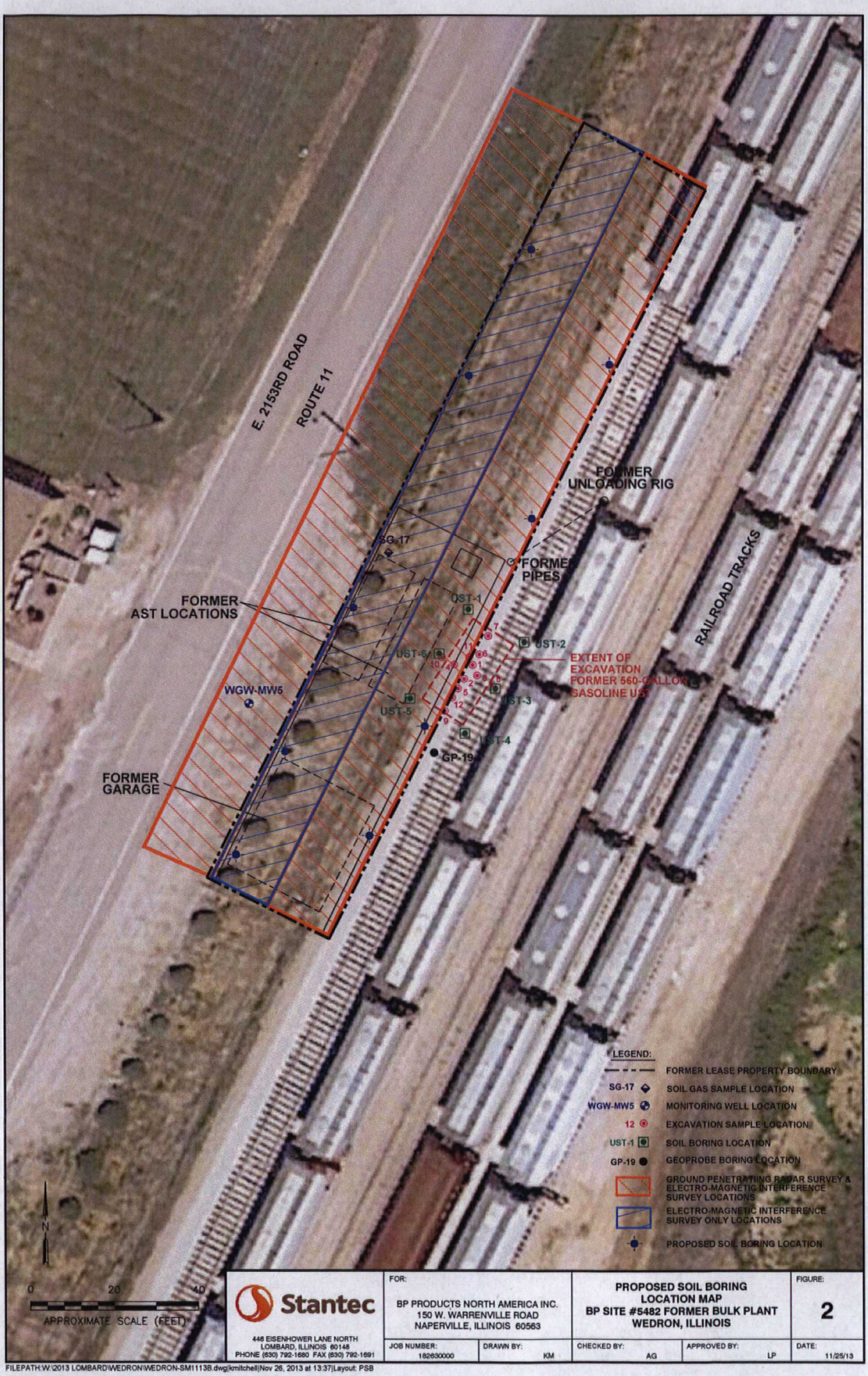

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PROPOSED SOIL BORING LOCATION MAP
BP SITE #5482 FORMER BULK PLANT
WEDRON, ILLINOIS

FIGURE: 2

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